



TECHNICAL BULLETIN 130

METAL REINFORCED LAMINATES

STANDARD GRADES



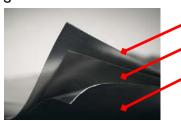






GRAFOIL Grade GHR

GRAFOIL Grade GHR is an uncured laminate made with GRAFOIL Grade GTB flexible graphite adhesively bonded to both faces of a 0.002" thick flat 316 or 316L stainless steel insert. Surface identifiable, laminate is branded with the GRAFOIL grade and source guarantee.



GRAFOIL Grade GTB

0.002" thick flat 316 or 316L stainless steel insert GRAFOIL Grade GTB

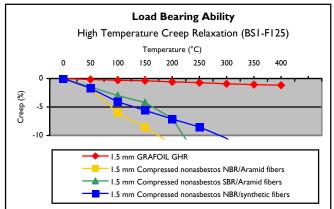
APPLICATIONS

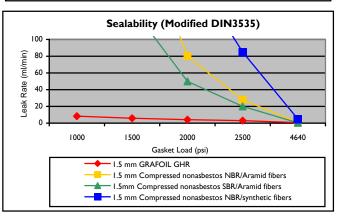
Grade GHR is suitable for standard industrial fluid sealing applications.

- Chemical
- Petrochemcial
- Refinery
- Steam Service
- Cryogenic Applications
- ASME Class 150 & 300 Flanges



While maintaining an effective seal, GRAFOIL material exhibits virtually no creep relaxation. As a result, the need for periodic bolt tightening is greatly reduced.





Page I of 2

For additional information, contact the GrafTech Sales Office: +1 (800) 253-8003 (Toll-Free in USA), +1 (216) 529-3777 (International), +1 (216) 529-3922 (Fax)



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Grade GHR Typical Properties¹



Laminate Construction:

- 1. GRAFOIL Grade GTB (per Technical Bulletin 436)
- 2. 0.002" thick flat 316 or 316L stainless steel (per ASTM F-A-240 and AMS 5524)
- 3. GRAFOIL Grade GTB (per Technical Bulletin 436)

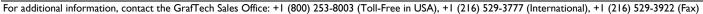
Thickness of Laminate O.032" (2.08 mm) Standard O.062" (1.57 mm) Standard O.082" (2.08 mm) Standard O.022" (3.10 mm) Standard Non-standard thicknesses may be available upon request 39.4" (1000 mm) Standard 60" (1524 mm) Standard for 0.062", 0.122" thick Non-standard widths may be available upon request 39.4" (1000 mm) Standard 60" (1524 mm) Standard for 0.062", 0.122" thick Non-standard widths may be available upon request 00" (1524 mm) Standard (available for <=0.062" thick) Non-standard lengths may be available upon request 15000 psi (35 MPa) load Recovery after 5000 psi (35 MPa) load Recovery after 5000 psi (35 MPa) load Creep Relaxation Method: BSI-F125 at 6391 psi (44.1 MPa) load up to 400°C Sealability Method: Mod DIN 3535 at 580 psi N ₂ at 32 MPa load Tensile Strength 3800 psi (26.31 MPa) Typical additive of steel and GRAFOIL flexible graphite Temperature Use Range Resistance in #3 Oil Thickness increase Weight change Certification Certification Certification Certification	CHARACTERISTIC	TYPICAL PROPERTY
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Weight change <33% Typical	Resistance in #1 Oil	
	Thickness increase	<8% Typical
Certification Certify to Grade	Weight change	<33% Typical
	Certification	Certify to Grade

ASME Gasket Factors

• "m" Factor: 2

"y" Stress: 900 psi (6.22 MPa)
 Max Gasket Unit Load: 24,000 psi (165.87 MPa)

Page 2 of 2





¹ Properties listed are typical and cannot be used as accept/reject specifications. Specifications are listed under Technical Bulletin 162.